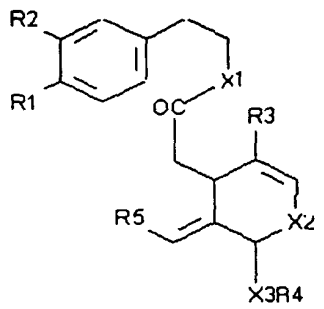
CLAIM OR CLAIMS

What is claimed is:

1. A method for treating a medical condition which involves angiogenesis in a subject, the method comprising administering to a subject in need of such treatment a therapeutically effective amount of a pharmaceutical composition having anti-angiogenic activity which contains as an active ingredient a therapeutically effective quantity of a compound of the formula:



wherein R1 and R2 are hydroxyl functional groups:

R3 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and $COOCH_3$;

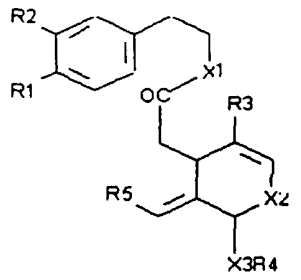
X1-X3 are functional groups selected from the group consisting of oxygen, sulfur, $-CH_2-$, or carboxy;

R4 is a functional group selected from the group consisting of hydrogen, C_1-C_6-alkoxy, glucose, B-D-glucopyranose, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, aryl, hydroxyl, halogen NO_2, NH_3, carbohydrate, amino acid, nucleotide and lipid; and

R5 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3, and CH_3.

2. The method of Claim 1 wherein the pharmaceutical composition includes the pharmaceutically acceptable carrier or diluent.

3. A method of inhibiting the vascularization of endothelial cells comprising contacting said cells with a pharmaceutical composition in an amount sufficient to inhibit the vascularization thereof which contains an effective amount of a compound of the formula:



wherein R1 and R2 are hydroxyl functional groups:

R3 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and $COOCH_3$.

X1 – X3 are functional groups selected from the group consisting of oxygen, sulfur, $-CH_2-$, or carboxy;

R4 is a functional group selected from the group consisting of hydrogen, C_1-C_6-alkoxy, glucose, B-D-glucopyranose, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, aryl, hydroxyl, halogen NO_2, NH_3, carbohydrate, amino acid, nucleotide, and lipid; and

R5 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and CH_3.

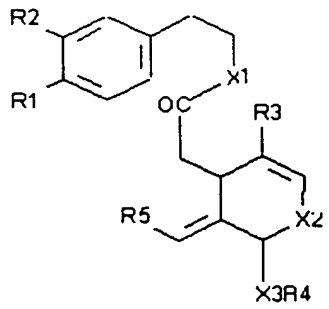
4. The method of Claim 3 wherein the pharmaceutical composition includes a pharmaceutically acceptable carrier or diluent.

5. The method of Claim 3 wherein said inhibition of the vascularization of the endothelial cells is conducted *in vivo*.

6. The method of Claim 3 wherein said inhibition of the the vascularization of said endothelial cells is conducted *in vitro*.

7. A method for treating a medical condition in which involves angiogensis in a subject, which comprises administering to a subject in need of such treatment a therapeutic or

effective amount of a pharmaceutical composition having anti-angiogenic activity which contains as an active ingredient at least one composition produced by the hydrolysis of a compound of the formula:



wherein R1 and R2 are hydroxyl functional groups:

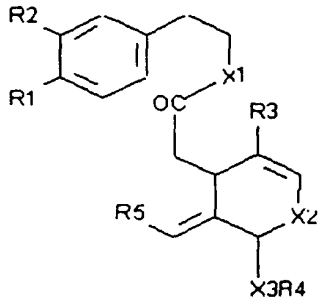
R3 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and $COOCH_3$;

X1-X3 are functional groups selected from the group consisting of oxygen, sulfur, $-CH_2-$, or carboxy;

R4 is a functional group selected from the group consisting of hydrogen, C_1-C_6-alkoxy, glucose, B-D-glucopyranose, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, aryl, hydroxyl, halogen NO_2, NH_3, carbohydrate, amino acid, nucleotide and lipid; and

R5 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3, and CH_3.

8. A method of enhibiting the vascularization of endothelial cells comprising contacting said cells with a pharmaceutical composition in an amount sufficient to inhibit the vascularization thereof which contains as an effective amount a compound selected from the group consisting of at one composition produced by the hydrolysis of a compound of the formula:



wherein R1 and R2 are hydroxyl functional groups:

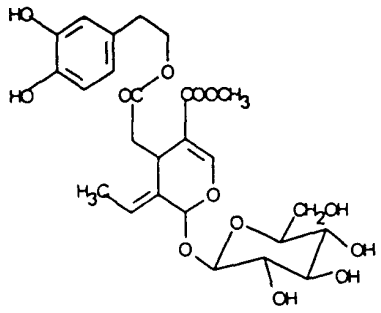
R3 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and $COOCH_3$;

X1-X3 are functional groups selected from the group consisting of oxygen, sulfur, $-CH_2-$, or carboxy;

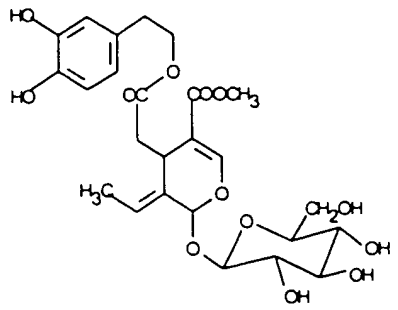
R4 is a functional group selected from the group consisting of hydrogen, C_1-C_6-alkoxy, glucose, B-D-glucopyranose, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, aryl, hydroxyl, halogen NO_2, NH_3, carbohydrate, amino acid, nucleotide and lipid; and

R5 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3, and CH_3.

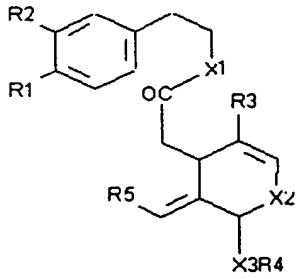
9. The method of Claim 1 wherein said composition comprises the formula:



10. The method of Claim 3 wherein said composition comprises the formula:



11. A method of treating cancer in a mammal in need of such treatment which is comprised of administering to said patient a therapeutically effective amount of a compound having the structure:



wherein R1 and R2 are hydroxyl functional groups:

R3 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3 and $COOCH_3$.

X1 – X3 are functional groupsmne selected from the group consisting of oxygen, sulfur, $-CH_2-$, or carboxy;

R4 is a functional group selected from the group consisting of hydrogen, C_1-C_6-alkoxy, glucose, B-D-glucopyranose, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, aryl, hydroxyl, halogen NO_2, NH_3, carbohydrate, amino acid, nucleotide, and lipid; and

R5 is a functional group selected from the group consisting of hydrogen, $C_1 - C_6$-alkyl, $C_2 - C_6$ – alkenyl, $C_2 - C_6$ – alkynyl, aryl, hydroxyl, $C_1 - C_6$ – alkoxy, halogen, NO_2, NH_3, and CH_3.

or a pharmaceutically acceptable salt, prodrug or hydrate thereof.

12. The method of treating cancer in accordance with Claim 11 wherein said cancer is selected from cancers of the lung, larynx, colon, rectum, pancreas, stomach, liver, lung, breast, skin, prostate, ovary, cervix, uterus, and bladder.

13. The method of treating cancer in accordance with Claim 11, wherein the cancer is selected from lymphoma, leukemia, glioblastoma, sarcoma and retinoblastoma.

14. The method of Claim 1 wherein the condition is an ocular disease.

15. The method of Claim 14 wherein the ocular disease comprises a disease associated with corneal neovascularization selected from the group consisting of diabetic retinopathy, retinopathy of prematurity, corneal graft rejection, neovascular glaucoma and retrolental fibroplasias, epidemic keratoconjunctivitis, vitamin A deficiency, contact lense overwear, atopic keratitis, superior limbic keratitis, pterygium keratitis sicca, sjogrens, acne rosacea, phylectenulosis, syphilis, mycobacteria infections, lipid degeneration, chemical burns, bacterial ulcers, fungal ulcers, herpes simplex infections, herpes zoster infections, protozoan infections, Kaposi sarcoma, Mooren ulcer, terrien's marginal degeneration, marginal keratolysis, trauma, systemic lupus, polyarteritis, Wegeners sarcoidosis, scleritis, Steven's Johnson disease, peraphigoid radial caratotomy and corneal graft rejection.

16. The method of Claim 14, wherein such ocular disease is a disease associated with a retinal/choroidal neovascularization selected from the group consisting of diabetic retinopathy, macular degeneration, sickle cell anemia, sarcoid, syphilis, pseudoxanthoma elasticum, Pagets disease, vein occlusion, artery occlusion, carotid obstructive disease, chronic uveitis/vitritis, mycobacterial infections, Lyme's disease, systemic lupus erythematosis, retinopathy of prematurity, Eales disease, Bechets disease, infections causing a retinitis or choroiditis, presumed ocular histoplasmosis, Bests disease, myopia, optic pits, Stargarts disease, pars planitis, chronic retinal detachment, hyperviscosity syndromes, toxoplasmosis, trauma and post-laser complications.

17. The method of Claim 14, wherein said ocular disease is selected from the group consisting of rubeosis and proliferative atrial retinopathy.

18. The method of Claim 1, wherein said condition comprises a disease associated with chronic inflammation selected from the group consisting of inflammatory bowel disease, psorsasis, sarcoidosis, and rheumatoid arthritis.

19. The method of Claim 18, wherein said inflammatory bowel disease selected from the group consisting of Crohn's disease and ulcerative colitis.

20. The method of Claim 1 wherein said compound is administered via a route selected from the group consisting of oral, buccal, rectal, parenteral, intraperitoneal, intradermal, transdermal, and intracheal.

21. The method of Claim 1 wherein said composition is formulated as a tablet or elixer for oral administration.

22. The method of Claim 1 wherein said composition is administered via a route selected from the group consisting of intramuscular or intravenous administration.

23. The method of Claim 1 wherein said composition is administered via inhalation.

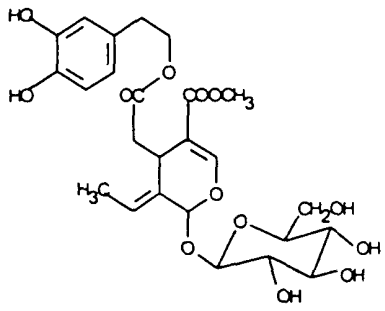
24. The method of Claim 11 wherein said compound is administered via a route selected from the group consisting of oral, buccal, rectal, parenteral, intraperitoneal, intradermal, transdermal, and intracheal.

25. The method of Claim 11 wherein said composition is formulated as a tablet or elixer for oral administration.

26. The method of Claim 11 wherein said composition is administered via a route selected from the group consisting of intramuscular or intravenous administration.

27. The method of Claim 11 wherein said composition is administered via inhalation.

28. The method of treating cancer in accordance with Claim 11 wherein said composition comprises the formula:



29. The method of Claim 7 when said at least one composition is selected from the group consisting of oleuropein aglycone, elenolic acid, beta-3, 4, - dihydroxyphenyethyl alcohol and methyl-o-methyl elenolate.

30. The method of Claim 8 wherein said at least one composition is selected from the group consisting of oleuropein aglycone, elenolic acid, beta-3, 4, - dihydroxyphenyethyl alcohol and methyl-o-methyl elenolate.